CASE REPORTS

Fibrosarcoma in the Antrum of a Child

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FIBROSARCOMA, not a common tumor in the head and neck area, entails certain problems in management, depending on the anatomic location and the cellular pattern of the lesion. It is a tumor which can appear at any age and has no predilection as to sex or race. In persons less than 15 years of age, sarcoma in general is seen nine times as frequently as carcinoma.[1] Fibrosarcomas may arise from the mesodermal portion of the dental follicle. In the case here reported an antral fibrosarcoma developed in a boy with an unerupted third molar.

REPORT OF A CASE

A 14-year-old white boy was admitted to hospital with complaint of toothache for several months. A month before admission, a soft, bluish-red tissue growth had been noted in the right third molar area, with associated loosening of the second molar tooth. The lesion (Figure 1) grew rapidly, became lobulated and bled easily when traumatized. Biopsy had showed it to be a highly cellular myxofibroma or fibrosarcoma. Radiographs showed an unerupted, partially formed third molar with a soft tissue mass almost filling the right maxillary antrum. A film of the chest showed no abnormality.

To be prepared for whatever procedure was necessary, anesthesia was induced with sodium thiopental, routine face and oral preparation with aqueous zepherin was carried out and the throat was packed with wet gauze against an intratracheal tube. Biopsy of the bulky tumor was done and the report on frozen section was fibrosarcoma. Thereupon the eyelids were approximated with a fine suture to protect the cornea and a Weber-Fergusson incision was made close to the ala, running up to the inner canthus and then laterally close to the palpebral margin. Next incision was made in the gingivobuccal fold, and the cheek flap, including the buccinator muscle, was reflected. The upper third of the maxilla was transected with a Stryker saw, most of the infraorbital rim and floor of the zygoma being preserved. A chisel was used to separate the posterolateral attachment of the maxilla from the pterygoid process of the sphenoid bone. The canine and first premolar teeth were extracted and a chisel was used to transect the hard palate to the junction of the soft palate. Bone-holding forceps were applied and, using chisels and heavy scissors, the tumor was freed and removed. The wall between antrum and nasal cavity was included with the specimen. The mucous membrane lining the antrum was removed and the ethmoid sinus was curetted. All raw surfaces were covered with a split skin graft. The operative defect was packed and the cheek flap resutured in its normal position. The lesion was well circumscribed and pseudoencapsulated (Figure 2).

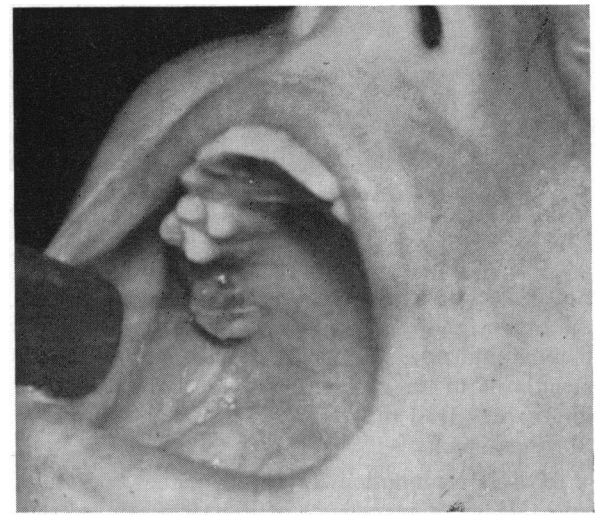

Figure 1.—Two cm exfoliating tissue growth (it was bluish-red) in the right third molar area.

The pathologist reported the right antrum contained a large, soft, hemorrhagic mass of spongy, mucoid tissue. Microscopic examination showed an extremely vascular tumor made up of highly pleomorphic elements (Figure 3). The chief element was a collagen-producing cell with long sinuous processes distributed in a loose fibromyxoid stroma. Widespread necrosis and many bone sequestra were

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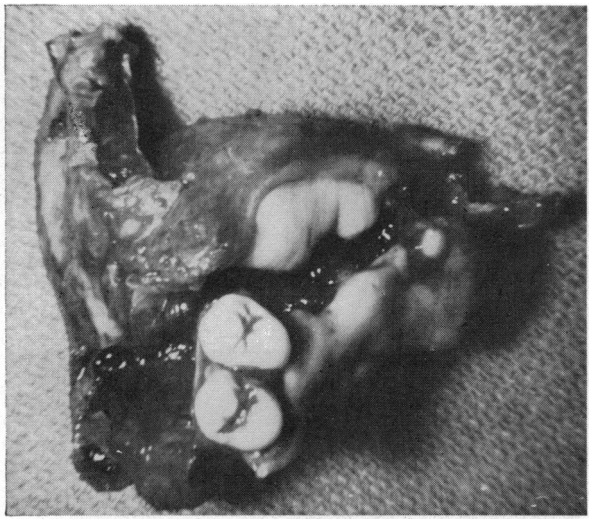

Figure 2.—Operative specimen—resected right antrum well encompassing pseudoencapsulated soft tissue lesion within.

noted. Mitotic figures were scattered widely through the tumor, and there was a considerable reactive inflamma-infiltrate. There was a moderate degree of acanthosis of the mucosa overlying the tumor. The impression was that the lesion was a low-grade fibrosarcoma.

At last examination 12 months after operation, no evidence of recurrence of disease was observed.

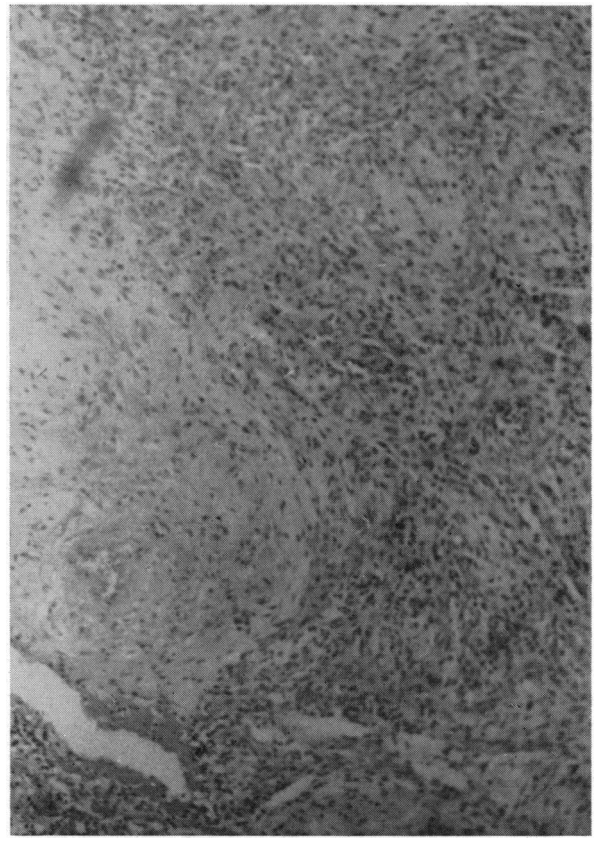

Figure 3.—Microscopic view showing vascular tumor made up chiefly of fibroblasts and highly pleomorphic elements and mitotic figures (×40).

DISCUSSION

Fibrosarcoma in the area of the head and neck is uncommon although there have been sporadic reports of such tumors in the tongue, orbit, pharynx, lip and antrum. The tumor is one of supportive tissue containing the keystone cells, fibroblasts, and a matrix of collagen and reticular fibers. It may start as a small nodule and grow to great bulk, occurring at any site. In cases of well differentiated tumor the cells are relatively uniform, without much hyperchromatism and with few or no mitoses. The histologic features can give a clue as to the tumor's probable future behavior. The more anaplastic the pattern, the more likely it is to invade, to grow rapidly and to recur. In one reported series the survival rate for patients with well differentiated lesions was 96.2 per cent against 49.9 per cent for those with anaplastic tumors.

Survival seems to be related to the location and origin of fibrosarcomas. Those that arise in skin (excluding scar) very seldom spread to other sites and, except for persistent, locally infiltrative growth, rarely show any other evidence of malignancy. In general, fibrosarcomas of soft parts recur after treatment in more than half of cases because of their tendency to infiltrate beyond palpable margins. Metastasis occurs in less than 10 per cent of anaplastic fibrosarcomas of soft parts.

The growth pattern is also very unpredictable. Some fibrosarcomas grow steadily and infiltrate surrounding structures. Others, for no known reason, may stop growing for months or years, then resume malignant activity.

The most highly malignant anaplastic fibrosarcomas are those of the thigh and lower extremity. Perineal lesions are relatively benign and metastasis seldom occurs. Periosteal lesions invade bone secondarily and are more malignant.[3] Metastasis to the lungs, vital organs and extensive local infiltration brings about the patient's death.

Before deciding on management, one must know the approximate anatomic confines of the lesion and biopsy must be done to determine the histologic structure. With surgical excision, including a margin of normal tissue is advisable to minimize the risk of local recurrence. Regrowth occurs early if any of the lesion remains.

Radical resection of the orbit and adjacent sinuses may not be necessary in dealing with fibrosarcomas of the maxilla and the alveolar ridge, for, unlike carcinomas, they have little tendency toward

metastasis. One problem in this connection is that sometimes it is difficult to tell whether a lesion is benign or malignant, even with histologic examination. However, destruction of the bony anterior maxillary sinus wall, pain and progressive growth implies a malignant character. Fibrosarcoma is exceedingly radioresistant, but an occasional tumor may respond to radiation therapy.

SUMMARY

An antral fibrosarcoma with dental involvement in a 14-year-old boy was radically excised and there was no evidence of recurrence a year after operation.

The prognosis of fibrosarcoma depends on the location and the degree of cellular differentiation.

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A Case of Probable Scurvy in the Citrus Belt

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THE COMBINATION of hemorrhagic phenomena and hypovitaminosis C is well known, but certainly not a problem one expects to find in a region (San Gabriel Valley, California) long famous for its citrus industry and where almost every home has an orange or lemon tree in the backyard. Yet the following case stresses again that vitamin C deficiency should be considered in any patient with spontaneous bleeding.

REPORT OF A CASE

A 45-year-old white woman entered Glendora Hospital because of profuse and unrelenting nosebleed for two days. The episode was acute in onset. There were no other hemorrhagic manifestations. Despite multiple posterior nasal packs the mucosa continued to ooze.

Blood pressure at the time of admittance was 122/76 mm of mercury. Platelets numbered 110,000 per cu mm at one determination and 230,000 at another. Bleeding time (Ivy) was 1 minute 40 seconds, coagulation time (Lee-White) 4 minutes 30 seconds, and prothrombin time by the Quick one-stage method was normal. Clot retraction complete at 12 hours. Serum proteins, calcium and phosphorus were within normal limits.

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Review of history elicited that the patient had been previously on a restricted diet for peptic ulcer. Further questioning by her attending physician brought out that she had neglected supplemental vitamins prescribed for the dietary period. At this point a serum ascorbic acid determination performed on a fresh specimen gave a value of 0.24 mg per 100 cc (normal: 0.6 to 2.0 mg). Large doses of ascorbic acid were given parenterally and dramatic relief of symptoms promptly followed. When the patient was observed six months later there was no evidence of recurrence.

COMMENT

The prostrate scorbutic patient with loose teeth and bleeding gums belongs largely to the past or to those situations in which one attends indigents of the "skid row" type. Otherwise scurvy is a distinct rarity in adults, at least in advanced societies. Careful experimental study of human volunteers has established that the earliest discernible manifestations of scurvy, hyperkeratosis about hair follicles notably on calves and buttocks, appears 134 days after elimination of vitamin C from the diet.[2] About three weeks later one may observe perifollicular petechiae and poor wound healing. However, there is sometimes little correlation between these changes and the symptoms usually noted in clinical practice. Thus at the London Hospital, Cutforth[3] found only two out of 11 adult scorbutic patients with notable perifollicular changes. He was more impressed with frank bleeding as a presenting sign. Often this takes the form of hemorrhage into muscles, painless hematuria, seepage of blood into serous cavities or epistaxis.[9]

While most scorbutic patients have the disease in combination with other vitamin deficiencies or with "stress" states such as infection, Davidson[4] first reported the interesting relationship between scurvy and peptic ulcer especially when the patients had been following the Sippy regimen. Subsequent studies indicated significant asboric acid depletion in ulcer patients even before dietary therapy was begun.[1,5,7,8,11] Portnoy and Wilkenson, for example, in a series of 58 patients with ulcer noted serum ascorbic levels from 0.14 to 0.59 mg per 100 cc but no clinical indication of scurvy. It is thus well established that patients with peptic ulcer may be at the threshold of scurvy even before special restrictive diet is applied. Reasons for this remain obscure although gastric irritation and intestinal hypermotility have been shown to lower plasma ascorbic acid levels appreciably.[6]

According to Ralli and Sherry,[9] a diagnosis of scurvy is justified if the following criteria are met: